
Selected Characteristics of Teachers in Wisconsin Public Schools, 1999-00 to 2020-21

Region 10 Comprehensive Center

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Grant Sim

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Executive Summary

This policy brief, produced by the Wisconsin Center for Education Research (WCER) at the University of Wisconsin-Madison as part of the Region 10 Comprehensive Center, is one in a series which examines selected topics related to Wisconsin's educator workforce. The goal of this brief is to present a descriptive profile of Wisconsin's teacher labor force over the past 20 years in terms of key attributes such as overall numbers of teachers, *what* they teach, and *where* they teach, and selected demographic characteristics (including gender, race/ethnicity, age, and years of experience).

Specific questions this brief addresses are as follows:

- How has the number of teaching staff in Wisconsin public schools changed over the past two decades, and how does this compare to trends in student enrollment?
- How has the distribution of Wisconsin teachers across area of teaching assignment, geographic locale type (including the state's largest districts), and region of the state changed over the past two decades?
- How have selected characteristics of Wisconsin's teaching force (gender, race/ethnicity, age, years of experience, and highest degree held) changed over time?

Key findings include the following:

- Wisconsin public schools collectively employed a total of 60,574 staff in 2020-21 whose primary assignment was teaching, representing an increase of 1357 teachers (2.3%) from 21 years earlier (1999-00).
- The number of teachers in Wisconsin has fluctuated somewhat from year to year, from a high of 61,814 in 2002-03 to a low of 58,333 in 2011-12 (the first year following the passage of Wisconsin's controversial Act 10).
- The number of students enrolled in Wisconsin public schools in grades PK-12 over this same 20-year timeframe decreased by 47,413 (-5.4%), most of which has occurred over the past seven years (between 2014-15 and 2020-21).
- Based on counts of teachers and students, an unofficial statewide student-teacher ratio can be constructed, which ranges from 14.9 to 13.7 over the past two decades (with decreasing student-teacher ratios observed since 2015-16 in particular).
- We grouped teachers into 16 categories to describe the subjects/grade ranges in which teachers work. By far, the most numerous category, as of 2020-21, was Elementary teachers (a category which includes approximately one-third of all teachers), followed (in descending order) by Special Education and English Language Arts. While Elementary teachers remain the most numerous, counts of this type of teacher have mostly decreased over the past 21 years.
- Looking at counts of Wisconsin public school teachers who have worked over the past nine years in schools with each of the four primary locale codes (City, Suburban, Town, Rural) used by the National Center for Education Statistics, we observe a small decrease in the number of teachers working in City schools, a relatively large increase for Suburban schools, and moderate increases for Town and Rural schools.

- Focusing on the state’s five largest districts, which in 2020-21 collectively contained nearly 15% of all public schools in Wisconsin and nearly 20% of statewide student enrollment, we observe that three of the five largest districts (Milwaukee, Madison, Kenosha, Green Bay, and Racine) had increases in teachers over this 21-year timeframe – but the collective increase among these districts was overshadowed by a decrease of over 1500 teachers in Milwaukee, which is by far the state’s largest district. Accordingly, the statewide “market share” of the five largest districts together in terms of teachers employed declined from 20.2% in 1999-00 to 18.0% in 2020-21.
- Examining the distribution of Wisconsin teachers by region of the state (which we operationalize using Wisconsin’s 12 Cooperative Educational Service Agencies, or CESAs), we observe that the more heavily-populated southeastern (CESA 1) and south-central (CESA 2) regions of the state combined contain nearly half of the state’s teachers, and that seven of the 12 CESAs had fewer teachers in 2020-21 compared to 1999-00. In general, the more rural areas of the state (CESAs 3, 5, 8, 9, and 12) saw the biggest declines in teachers, both in absolute terms as well as percentage-wise.
- In terms of demographics, Wisconsin’s teaching corps is predominantly female (75.0% in 2020-21), and has remained overwhelmingly (more than 95%) white in recent years, despite increasing levels of diversity among public school students statewide. Black and Hispanic/Latinx teachers are particularly under-represented in relation to each group’s share of public school enrollment statewide, comprising just 2.0% and 2.2% of the state’s teachers in 2020-21 respectively, compared to 8.9% and 12.8% of the state’s public school enrollment, respectively.
- The average age of Wisconsin public school teachers has remained stable over the past two decades (in the 42.2-43.3 range), with the one noteworthy trend being a relatively sharp one-year decline from 43.3 in 2010-11 to 42.6 in 2011-12 following the passage of Act 10 and the subsequent retirement of relatively large numbers of teachers statewide.
- Average years of both total teaching experience and local (same district) teaching experience show a bit more fluctuation over time, with one-year declines on both measures evident from 2010-11 to 2011-12.
- The distribution of total teaching experience by categories (first year, 2-5 years, etc.) in 2020-21 shows that a relatively small share (4.4%) of all teachers statewide are in their first year of teaching, while the largest share (nearly one-third) has 20 or more years of experience.
- Two interesting trends are evident over the past 20 years in terms of teachers’ highest level of education: first, a steady increase in teachers with master’s degrees from 1999-00 through 2010-11; and second, a relatively sharp decrease in the percentage of teachers with master’s degrees after 2015-16, with bachelor’s-holders becoming the modal level of educational attainment once again. We speculate that this trend may be attributable at least in part to increasing numbers of Wisconsin districts, particularly after Act 10, which have either condensed or replaced entirely the traditional “step and lane” salary schedules that had been the norm for many years.

Introduction and Guiding Questions

This policy brief, produced by the Wisconsin Center for Education Research (WCER) at the University of Wisconsin-Madison as part of the Region 10 Comprehensive Center, is one in a series which examines selected topics related to Wisconsin's educator workforce. The goal of this brief is to present a descriptive profile of Wisconsin's teacher labor force over the past 20 years in terms of key attributes such as overall numbers of teachers, *what* they teach, and *where* they teach, selected demographic characteristics (including gender, race/ethnicity, age, and years of experience), and selected trends in compensation. A forthcoming brief in this same series tracks these same trends for principals in Wisconsin public schools, while related briefs focus on trends in mobility and stability among both teachers and principals.

Specific questions this brief addresses are as follows:

- How has the number of teaching staff in Wisconsin public schools changed over the past two decades, and how does this compare to trends in student enrollment?
- How has the distribution of Wisconsin teachers across area of teaching assignment, geographic locale type, and region of the state (including the state's largest districts) changed over the past two decades?
- How have selected characteristics of Wisconsin's teaching force (gender, race/ethnicity, age, years of experience, and highest degree held) changed over time?

About the Data

The data used to produce this brief come from publicly-available staff files maintained by the Wisconsin Department of Public Instruction (DPI). Specifically, DPI produces data files each year for licensed staff working within Wisconsin public schools which include selected demographic characteristics (gender, race/ethnicity, age via year of birth), highest degree attained, compensation (salary and fringe), years of experience, work location (by school and district), type of license held, and FTE level. Cross-year matching at the individual level was done for 2016-17 and beyond, using unique staff IDs assigned by DPI. Prior to 2016-17, matches were done by last name, first name, gender, race/ethnicity, and birth year, with approximately 1% of individuals unable to be reliably matched over time and ultimately dropped from the matching process each year.¹

For this and other briefs within the series, we define teachers as staff whose primary role is teaching (measured by having a ratio of FTE in teaching assignments to total FTE of 0.5 or higher). Applying this definition of teachers means that a relatively small number of staff who have both teaching and non-teaching assignments (such as principals who also teach) are excluded from the descriptive statistics below, as are staff who work less than half-time. In the case of teachers who work in multiple schools during the same school year, we weighted their participation in some instances (such as the distribution

¹ We also excluded the less than 1% of individuals working in more than four schools in any one year to reduce complexity in reporting school-based characteristics and mobility.

of teachers by geographic locale and region) by their FTE level, in order to keep this group in the analysis set.

Key Findings

How has the number of teaching staff in Wisconsin public schools changed over the past two decades, and how does this compare to trends in student enrollment?

Wisconsin public schools collectively employed a total of 60,574 staff in 2020-21 whose primary assignment was teaching (as defined above), representing an increase of 1357 teachers (2.3%) from 21 years earlier, in 1999-00. The number of public school teachers in Wisconsin has fluctuated somewhat from year to year, as shown in Figure A below, from a high of 61,814 in 2002-03 to a low of 58,333 in 2011-12 (the first year following the passage of Wisconsin's controversial Act 10, which curtailed the influence of public sector unions such as those representing teachers). As a point of comparison, the number of *students* enrolled in Wisconsin public schools in grades PK-12 over this same 20-year timeframe is shown in Figure B, with an overall decrease of 47,413 students (-5.4%), most of which has occurred over the past seven years (between 2014-15 and 2020-21), and particularly in the most recent year (perhaps due to the COVID-19 pandemic). Using these two data sets concurrently, an unofficial statewide student-teacher ratio (Figure C) can be constructed, which ranges from 14.9 to 13.7 over the past two decades (with decreasing student-teacher ratios observed since 2015-16 in particular).

One key takeaway from comparing counts of teachers and students over time is that these two figures don't move immediately in lockstep with one another, as schools typically make more gradual adjustments in staffing levels rather than reacting to what may be normal, but short-term fluctuations in student enrollment. Schools are also limited in how much, and how quickly, they can adjust staffing levels by factors such as the desire to maintain low class size (at the early elementary grades in particular) and the need to continue offering specialized courses (Chemistry, Band, etc.) at the middle and high school levels even though relatively few students may take these courses.

Figure A: Number of Teachers in Wisconsin Public Schools, 1999-00 through 2020-21

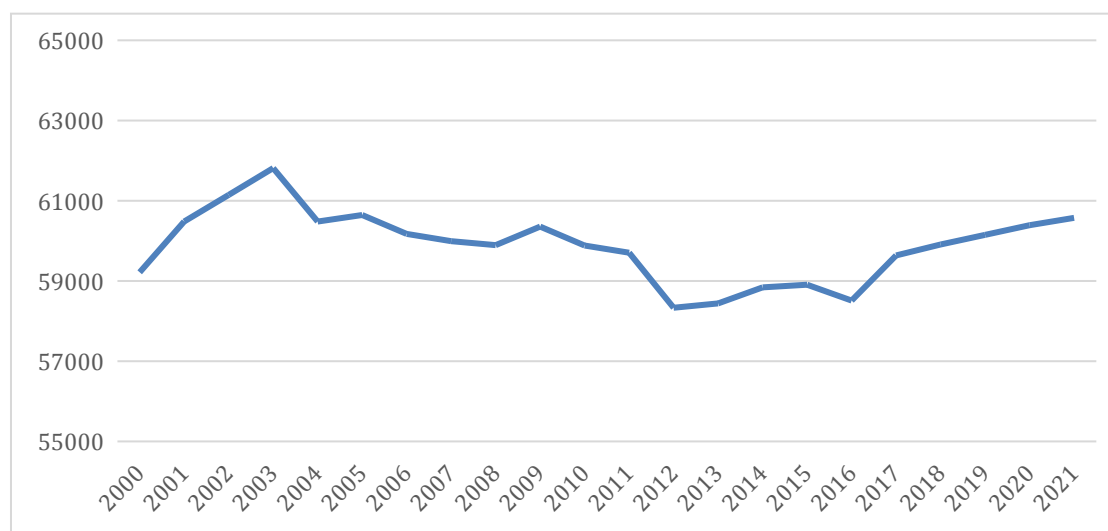
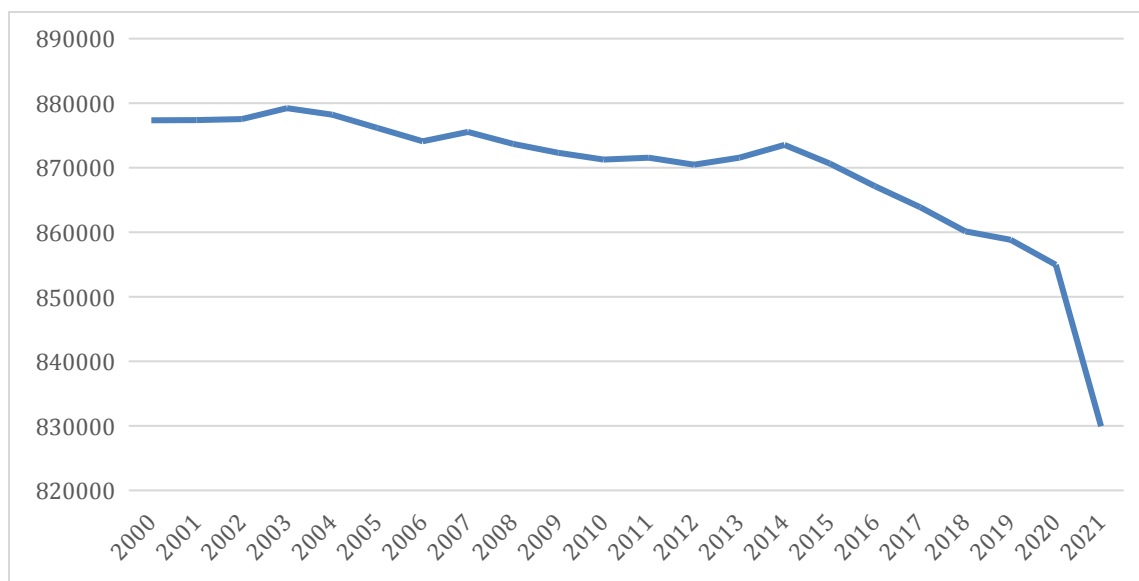
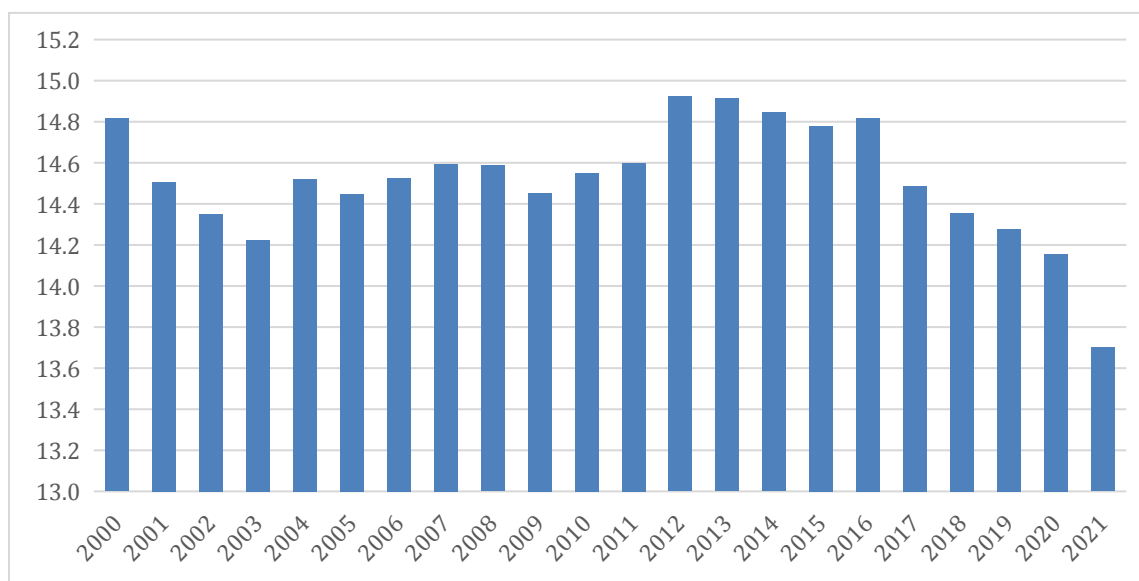


Figure B: Wisconsin Public School Enrollment (Grades PK-12), 1999-00 through 2020-21*



*The official third Friday enrollment count for 2004-05 as published by DPI was 863,495, but DPI reports that this may be inaccurate due to the implementation of a new enrollment data system that year. Accordingly, the enrollment count reported in Figure B for 2004-05 is 876,158, which represents the midpoint of the difference between the 2003-04 count (878,217) and the 2005-06 count (874,098).

Figure C: Unofficial Student-Teacher Ratio for Wisconsin Public Schools, 1999-00 to 2020-21



How has the distribution of Wisconsin teachers across area of teaching assignment, geographic locale type, and region of the state (including the state's largest districts) varied over the past two decades?

Wisconsin Administrative Code (PI 34) classifies Teacher licenses into combinations of grade ranges (developmental levels) and subject areas. For the purpose of this and other briefs within this series, we group teachers into 16 assignment categories.² By far the most numerous such category of teaching assignment across all years has been Elementary teachers (a category which includes approximately one-third of all teachers), followed (in descending order) by Special Education and English Language Arts (Table 1). While Elementary teachers remain the most numerous assignment type, there were 1300 fewer Elementary teachers in 2020-21 compared to 1999-00 (a 6.1% decrease), whereas the number of Special Education teachers increased by approximately 1800 (+23.0%). Large percentage increases over the past 21 years were also observed for Math (+26.4%) and English as a Second Language teachers (+100.2%), while large percentage decreases are seen for Family and Consumer Education (-31.4%) and Health teachers (-25.4%).

Table 1: Counts of Wisconsin Public School Teachers by Area of Assignment in 1999-00 and 2020-21

Teaching Assignment Category	# Teachers 1999-00	% of All Teachers 1999-00	# Teachers 2020-21	% of All Teachers 2020-21	# Change, 1999-00 to 2020-21	% Change 1999-00 to 2020-21
Elementary	21,238	35.9%	19,938	32.9%	-1300	-6.1%
Special Education	7809	13.2%	9603	15.9%	+1794	+23.0%
English Language Arts	4836	8.2%	5043	8.3%	+207	+4.3%
Arts/Music	4477	7.6%	3995	6.6%	-482	-10.8%
Math	2923	4.9%	3695	6.1%	+772	+26.4%
Science	3174	5.4%	3384	5.6%	+210	+6.6%
Social Studies	2850	4.8%	2943	4.9%	+93	+3.3%
Career/Technical Educ.	2167	3.7%	1889	3.1%	-278	-12.8%
Physical Education	2257	3.8%	1893	3.1%	-364	-16.1%
Foreign Languages	1613	2.7%	1505	2.5%	-108	-6.7%
English as a Second Lang.	444	0.7%	889	1.5%	+445	+100.2%
Family Consumer Educ.	851	1.4%	584	1.0%	-267	-31.4%
Gifted & Talented	149	0.3%	143	0.2%	-6	-4.0%
Health	197	0.3%	147	0.2%	-50	-25.4%
Multiple	2949	5.0%	3028	5.0%	+79	+2.7%
Other	1283	2.2%	1895	3.1%	+612	+47.7%
Total	59,217	100.0%	60,574	100.0%	+1357	+2.3%

In terms of where Wisconsin public school teachers are employed, and how things have changed over time, one useful comparison draws upon the four locale codes (City, Suburban, Town, Rural) assigned by the U.S. Department of Education's National Center for Education Statistics (Geverdt, 2015) to schools and districts nationwide. Descriptions of the four locale types, along with their respective sub-types, appear in Appendix B. Due to changes in locale code definitions made by NCES for 2012-13 based on the

² Refer to Appendix A for a list of all teaching area of assignments and their corresponding category.

2010 Census, we are only able to show this information in a comparable manner from the 2012-13 school year onward.

Figure D and Table 2 below show counts of Wisconsin public school teachers by locale type at the school level over the past eight years. Wisconsin schools with a City designation (n=525 in 2020-21) collectively employed 161 fewer teachers in 2020-21 (16,835) compared to 2012-13 (16,996), and the corresponding “market share” of City schools (the percentage of all teachers statewide who taught in City schools) decreased slightly, from 29.1% of the statewide total in 2012-13 to 27.8% in 2020-21. The largest increase, between 2012-13 and 2020-21 in terms of where Wisconsin public school teachers work (both numerically and percentage-wise) occurred in Suburban schools (n=465 in 2020-21). Suburban schools collectively employed 1340 more teachers in 2020-21 compared to 2012-13 (representing 62.8% of the statewide increase of 2133 teachers over that same timeframe). Rural schools, which are the largest group of Wisconsin public schools numerically (n=793 in 2020-21, or 36.1% of the statewide total number of schools), saw increases in both the number of teachers (+670) and market share (+0.2) between 2012-13 and 2020-21, despite gradual declines in student enrollment in rural schools statewide over the past two decades.

Figure D: Counts of Wisconsin Public School Teachers by Locale Type, 2012-13 through 2020-21

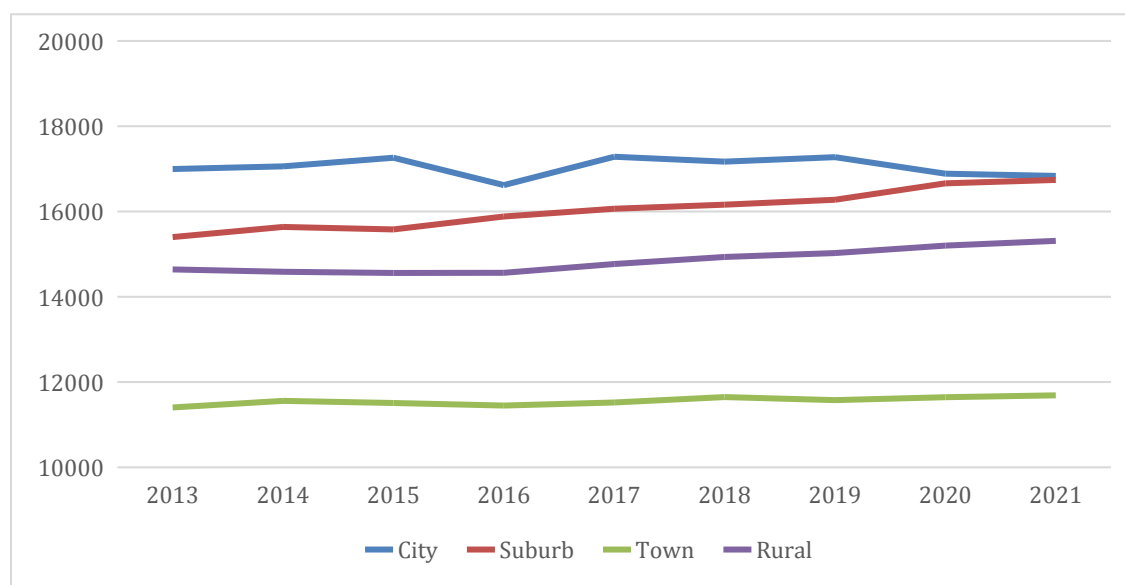


Table 2: Teacher Counts, Percentage Change, and Statewide Market Share between 2012-13 and 2020-21 by Locale Type (School-Level)

Locale Type	# of Schools 2020-21	# of Teachers 2012-13	# of Teachers 2020-21	Change in # of Teachers, 2012-13 to 2020-21	% Change in # of Teachers, 2012-13 to 2020-21	Statewide Teacher "Market Share" 2012-13	Statewide Teacher "Market Share" 2020-21
City	525	16,996	16,835	-161	-0.9%	29.1%	27.8%
Suburb	465	15,400	16,740	1340	8.7%	26.4%	27.6%
Town	412	11,404	11,688	284	2.5%	19.5%	19.3%
Rural	793	<u>14,641</u>	<u>15,311</u>	670	4.6%	<u>25.1%</u>	<u>25.3%</u>
Total	2195	58,441	60,574	2133	3.6%	100.0%	100.0%

Table 3 provides a summary of changes between 1999-00 and 2020-21 in terms of the number of teachers working in the state's five largest districts, which collectively contained nearly 15% of all public schools in Wisconsin and nearly 20% of statewide student enrollment in 2020-21. Three of the five largest districts had increases in teachers over this 21-year timeframe, although the collective increase among these three was overshadowed by a decrease of over 1500 teachers in Milwaukee. The fifth district, Racine, saw a relatively no overall change in teachers over the same timeframe. Accordingly, the statewide "market share" of the five largest districts together in terms of number of teachers declined from 20.2% of the statewide total in 1999-00 to 18.0% in 2020-21. As one point of comparison, student enrollment counts for the same two years (1999-00 and 2020-21) are shown for the same five districts in Table 4. One of the five districts (Madison) saw modest increases in student enrollment over the 21-year timeframe, while Racine and Milwaukee experienced double-digit percentage decreases in enrollment.

Table 3: Teacher Counts, Percentage Change, and Statewide Market Share between 1999-00 and 2020-21 for Five Largest Districts in Wisconsin

District	# Schools 2020-21	# Teachers 1999-00	# Teachers 2020-21	Change in # of Teachers	% Change	Statewide Market Share 1999-00	Statewide Market Share 2020-21
Milwaukee	158	5970	4456	-1514	-25.4%	10.1%	7.4%
Madison	53	2047	2205	158	7.7%	3.5%	3.7%
Kenosha	41	1333	1488	155	11.6%	2.3%	2.5%
Green Bay	43	1263	1435	172	13.6%	2.1%	2.4%
Racine	<u>29</u>	<u>1311</u>	<u>1302</u>	<u>-9</u>	<u>-0.7%</u>	<u>2.2%</u>	<u>2.2%</u>
Total	324	11,924	10,886	-1038	-8.7%	20.2%	18.0%

Table 4: PK-12 Student Enrollment in 1999-00 and 2020-21 for Five Largest Districts in Wisconsin

	1999-00	2020-21	#Change	%Change
Milwaukee	99,729	71,510	-28,219	-28.3%
Madison	24,943	26,151	1208	4.8%
Kenosha	19,651	19,244	-407	-2.1%
Green Bay	19,540	19,171	-369	-1.9%
Racine	21,250	16,254	-4996	-23.5%
Urban Total	185,113	152,330	-32,783	-17.7%
% of State Total	21.1%	18.4%	n/a	n/a

Looking at the distribution of Wisconsin teachers by *region*, Table 5 shows the number of teachers (and percentage of the statewide total) working in districts located within each of Wisconsin's 12 Cooperative Educational Service Agencies (CESAs) in 1999-00 and 2020-21. The more heavily-populated southeastern (CESA 1) and south-central (CESA 2) regions of the state combined contain nearly half of the state's teachers, although CESA 1 experienced a net loss of 577 teachers (-3.4%) over the past two decades (largely attributable to the decreases in Milwaukee noted above in Table 4), while CESA 2 saw an increase of 1596 teachers (+16.1%), fueled by student enrollment gains in Madison and its suburban districts. Seven of the 12 CESAs had fewer teachers in 2020-21 compared to 1999-00, with percentage decreases ranging from 0.3% to 15.7%. In general, the more rural areas of the state (CESAs 3, 5, 8, 9, and 12) saw the biggest declines in teachers, both in absolute terms as well as percentage-wise.

Table 5: Teacher Counts by CESA in Selected Years

CESA	1999-00:		2020-21:		#Change 1999-00 to 2020-21	% Change 1999-00 to 2020-21
	# of Teachers	% of State Total	# of Teachers	% of State Total		
1	16,959	28.6%	16,382	27.0%	-577	-3.4%
2	9923	16.8%	11,520	19.0%	1596	16.1%
3	1808	3.1%	1615	2.7%	-193	-10.7%
4	2666	4.5%	2811	4.6%	145	5.4%
5	4058	6.9%	3770	6.2%	-288	-7.1%
6	6437	10.9%	6893	11.4%	455	7.1%
7	5686	9.6%	6202	10.2%	516	9.1%
8	1814	3.1%	1529	2.5%	-285	-15.7%
9	2568	4.3%	2469	4.1%	-99	-3.8%
10	2741	4.6%	2733	4.5%	-7	-0.3%
11	3249	5.5%	3494	5.8%	245	7.5%
12	1307	2.2%	1155	1.9%	-152	-11.6%
Total	59,217	100.0%	60,574	100.0%	1357	2.3%

How have selected characteristics of Wisconsin's teaching force (gender, race/ethnicity, age, years of experience, and highest degree held) changed over time?

The next section examines changes in Wisconsin's teaching force over the past two decades in terms of gender, race/ethnicity, years of teaching experience (both total and local), and highest degree held.

Wisconsin's teaching corps is predominantly female (75.0% in 2020-21), and has become slightly more so over the past two decades (Figure E). In terms of race/ethnicity, several recent reports (Jones, 2019; Chapman & Brown, 2020) have noted that Wisconsin teachers have remained overwhelmingly (more than 95%) white in recent years, despite increasing levels of diversity among public school students statewide. Our own review of Wisconsin teacher data confirms that Black and Hispanic/Latinx teachers are particularly under-represented in relation to each group's share of public school student enrollment statewide, comprising just 2.0% and 2.2% of the state's teachers in 2020-21, respectively (Figure F), compared to 8.9% and 12.8% of the state's public school enrollment, respectively (Figure G). Asian and American Indian teachers are also under-represented in relation to each group's share of students statewide, representing less than 1% of teachers in each case compared to 4.2% and 1.1% of students in 2020-21, respectively.

We also note (in Table 6 below) a very mixed picture in terms of absolute numbers of teachers of color in Wisconsin public schools. While Hispanic/Latinx teachers remain underrepresented in relation to this group's share of public school enrollment statewide, and the number of Hispanic/Latinx teachers remains low, their number increased by 809 (160.0%) between 1999-00 and 2020-21. The absolute number of both American Indian and Asian teachers increased as well. Conversely, there were 376 fewer Black teachers statewide in 2020-21 compared to 1999-00 (a 23.5% decrease).

We also note that most of the state's teachers of color continue to work in a relatively small number of districts, although they are somewhat less concentrated in these districts (mostly larger City districts) than in the past. In 1999-00, 84% of the state's teachers of color worked in the state's five largest school districts, compared to 61% in 2020-21.

Figure E: Wisconsin Public School Teachers by Gender, 1999-00 through 2020-21

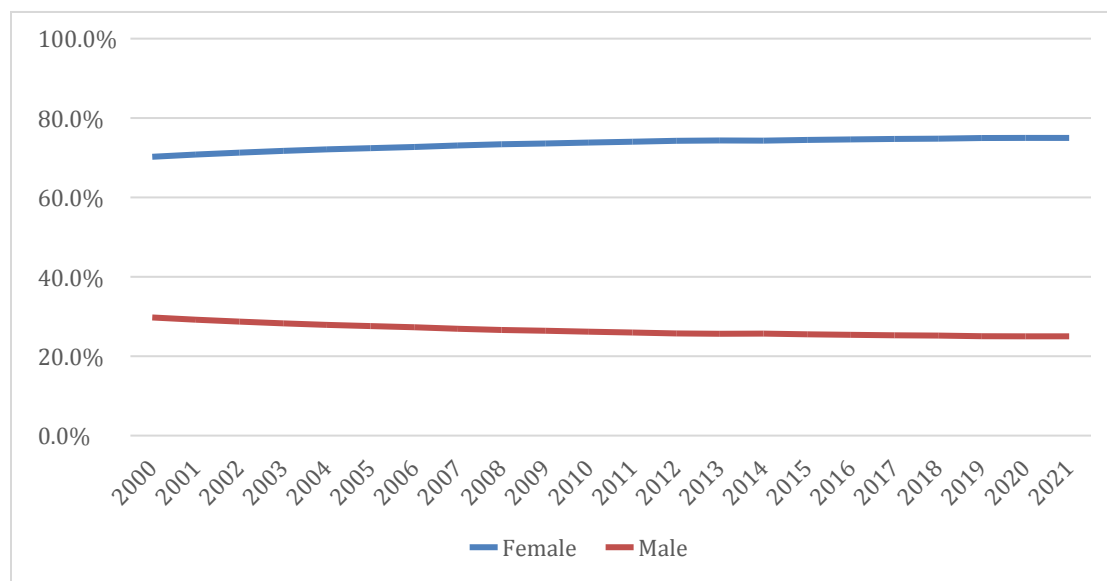


Figure F: Teachers of Color as a Percentage of All Wisconsin Public School Teachers, 1999-00 through 2020-21

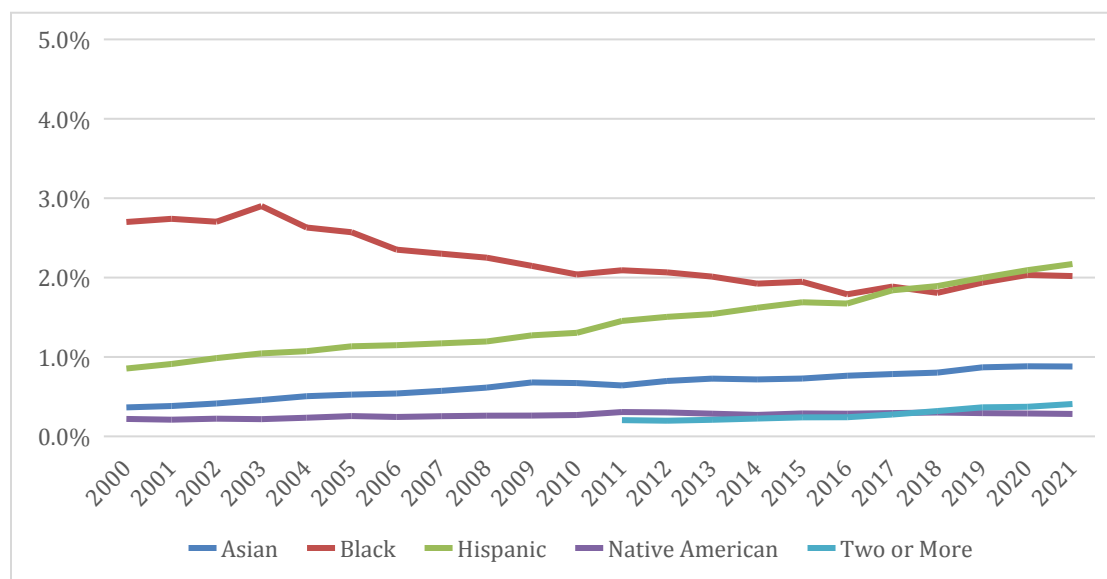


Figure G: Students of Color as a Percentage of Statewide Public School Enrollment, 1999-00 through 2020-21

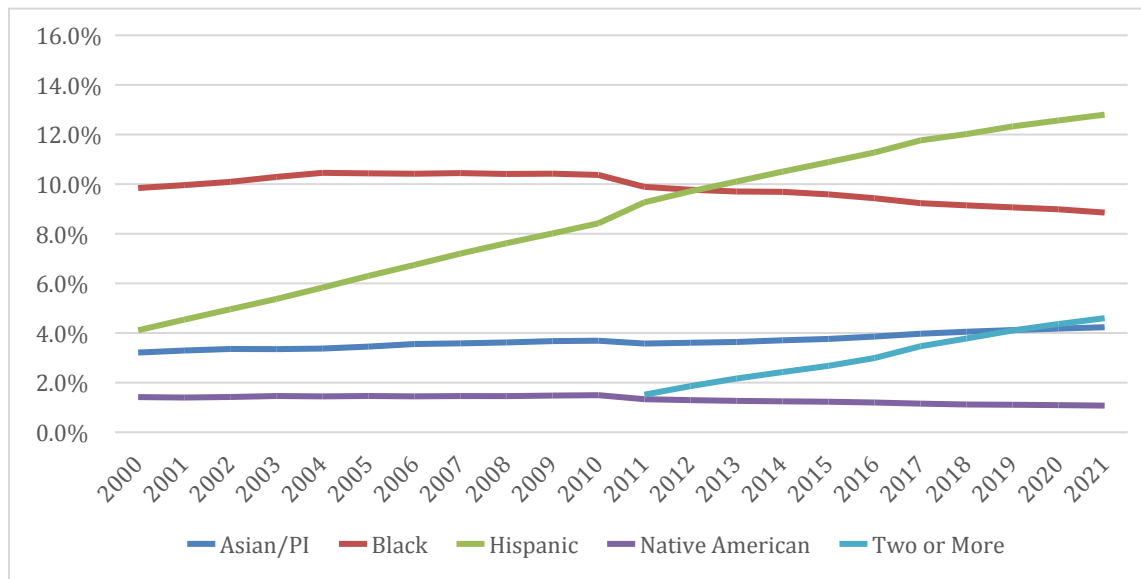


Table 6: Teacher Counts by Race/Ethnicity for Selected Years

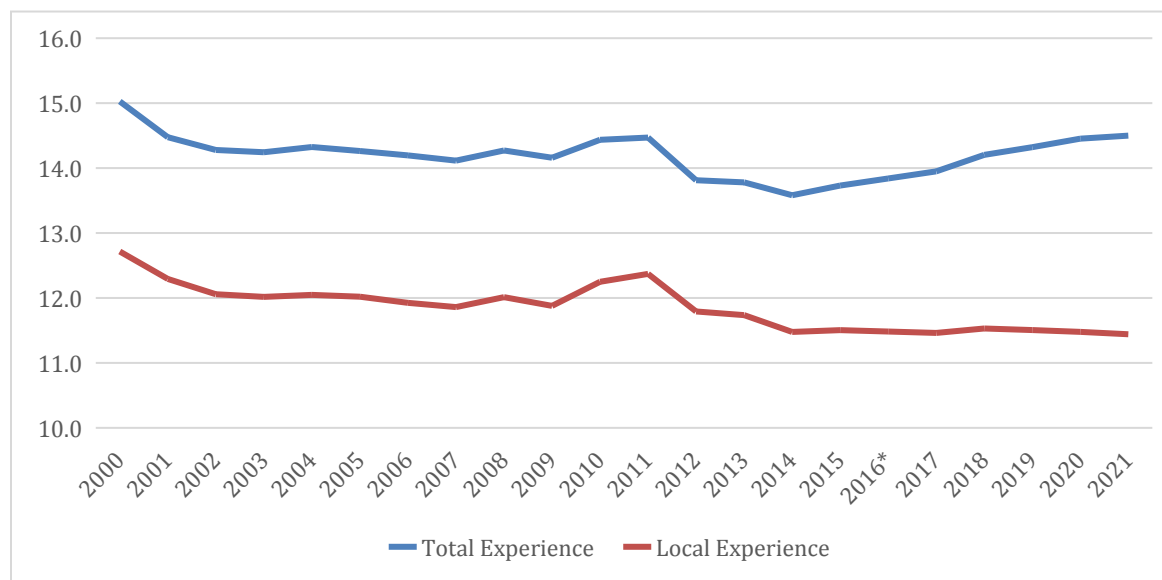
Race/Ethnicity	1999-00:		2009-10		2020-21:	
	# of Teachers	% of State Total	# of Teachers	% of State Total	# of Teachers	% of State Total
American Indian	130	0.2%	161	0.3%	171	0.3%
Asian	216	0.4%	402	0.7%	533	0.9%
Black	1599	2.7%	1221	2.0%	1223	2.0%
Hispanic/Latinx	506	0.9%	781	1.3%	1315	2.2%
Pacific Islander	n/a	n/a	n/a	n/a	30	0.0%
Two or More	n/a	n/a	n/a	n/a	247	0.4%
White	56,766	95.9%	57,319	95.7%	57,055	94.2%
Total	59,217	100.0%	59,884	100.0%	60,574	100.0%

Note: Pacific Islander and Two or More were not reported until 2010-11.

The average age of Wisconsin public school teachers has remained very stable over the past two decades, although subtle changes are observable in selected districts. Statewide, the average age of teachers has remained in the 42.2-43.3 range, with perhaps the one noteworthy trend being a relatively sharp one-year decline from 43.3 in 2010-11 to 42.6 in 2011-12 following the passage of Act 10 and the subsequent retirement of relatively large numbers of teachers statewide. Little overall change over time is evident at either the 25th percentile (approximately 34 years old) or 75th percentile (approximately 51 years old) of the statewide teacher age distribution.

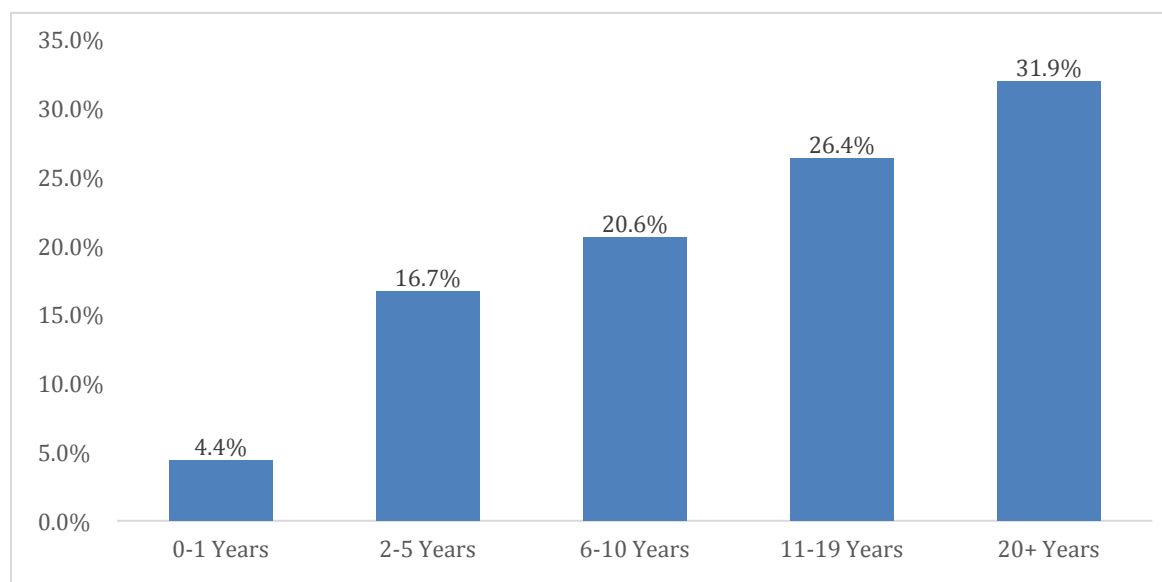
Average years of both total teaching experience and local (same district) teaching experience (Figure H) show a bit more fluctuation over time, with one-year declines on both measures evident from 2010-11 to 2011-12. Figure I shows the distribution of total teaching experience in 2020-21, with a relatively small share (4.4%) of all teachers statewide in their first year of teaching and the largest share (nearly one-third) with 20 or more years of experience.

Figure H: Average Years of Total and Local Teaching Experience, 1999-00 through 2020-21



*Due to inconsistencies in years of experience data for 2015-16 only (which we have verified with DPI), we use the midpoint of the difference between 2014-15 and 2016-17 data.

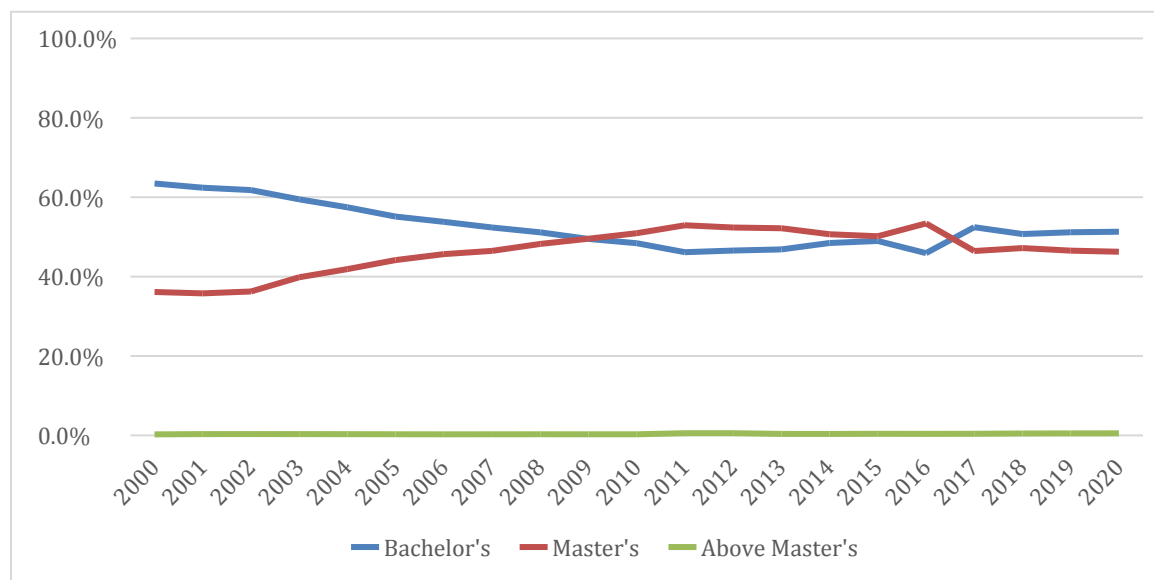
Figure I: Distribution of Total Teaching Experience, 2020-21



Two interesting trends are evident over the past 21 years in terms of teachers' highest level of education (Figure J). A first is the steady increase in teachers with master's degrees: at the turn of the century (the 1999-00 school year), almost two-thirds of teachers (63.5%) held a bachelor's degree as their highest credential, compared to around one-third (36.1%) with a master's degree and 0.3% with a doctorate or equivalent degree. From 1999-00 through 2010-11, however, the percentage of teachers who either came into teaching with a masters or earned one while teaching increased steadily, and in 2008-09, the share of teachers with a master's as their highest credential overtook for the first time the share of teachers with bachelor's degrees.

Beginning in 2016-17, however, a second shift began, which saw a relatively sharp decrease in the percentage of teachers with master's degrees (from 53.4% in 2015-16 to 46.4% in 2016-17), with bachelor's-holders becoming the modal level of educational attainment once again. This trend may be attributable at least in part to increasing numbers of Wisconsin districts that have either condensed or replaced entirely the traditional "step and lane" salary schedules which had been the norm for many years, particularly after the passage of Wisconsin's Act 10 (Kimball et al, 2016). Many districts, both in Wisconsin and nationwide, have begun to modify or replace traditional salary schedules, which awarded annual increases based mostly on years of experience and/or obtaining additional degrees, with an array of alternatives that includes performance pay, additional compensation for taking on leadership roles, and "micro-credentialing" systems that provide increases for specific, targeted forms of professional development that are aligned to a teacher's professional growth plan and/or district and school priorities. Collectively, these policy shifts may have made it relatively less attractive for teachers to invest the time and money needed to earn a Master's degree, although it is not clear whether this recent trend is only temporary.

Figure J: Distribution of Wisconsin Public School Teachers by Highest Degree Earned



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Appendix A: Teacher Area of Assignment to Assignment Category

As DPI staff files provide over 100 different areas of assignment that teachers work in, for the purpose of this and other briefs within this series, we grouped teachers into 16 assignment categories. The following table provides a crosswalk between the assignment areas to our assignment categories.

Table A1: Area of Assignment to Assignment Category

Teaching Assignment Category	Teaching Area of Assignment
Arts/Music	Art
Arts/Music	Dance
Arts/Music	Music (Choral) (grades 6-12 only)
Arts/Music	Music (General)
Arts/Music	Music (Instrumental)
CTE	Business and Office - Vocational
CTE	Business Education
CTE	Career Education
CTE	Computer Literacy
CTE	Computer Science
CTE	Keyboarding
CTE	Marketing Education - Vocational
CTE	Technology Education
CTE	Technology Occupations/Communications
CTE	Technology Occupations/Construction
CTE	Technology Occupations/Manufacturing
CTE	Technology Occupations/Transportation
CTE	Technology Related Occupations
CTE	Trade Specialist
ELA	English
ELA	Journalism
ELA	Language Arts - Fusion
ELA	Reading and Reading Interventions(including RtI for reading)
ELA	Speech (Academic)
ELA	Theater
ELA	Title I - Reading
Elementary	Elementary - All Subjects
ESL	English as a Second Language
Family and Consumer Education	Family and Consumer Education (FCE)
Family and Consumer Education	Family and Consumer Services (HERO)
Family and Consumer Education	FCE/Children Services
Family and Consumer Education	FCE/Family and Community Services
Family and Consumer Education	FCE/Food Service
Foreign Language	American Sign Language

Foreign Language	Chinese
Foreign Language	French
Foreign Language	German
Foreign Language	Indian History and Culture
Foreign Language	Indian Language
Foreign Language	Italian
Foreign Language	Japanese
Foreign Language	Latin
Foreign Language	Other Foreign Languages
Foreign Language	Russian
Foreign Language	Spanish
Gifted and Talented	Gifted and Talented
Health	Health
Health	Health Occupations - Vocational
Math	Mathematics
Math	RtI Math Intervention
Math	Title I - Mathematics
Phy Ed	Physical Education
Phy Ed	Recreation
Science	Advanced or AP Environmental Science
Science	Agriculture
Science	Astronomy
Science	Biology/Life Science
Science	Chemistry
Science	Earth Science
Science	General Science
Science	Geology
Science	Introductory Environmental Science
Science	Physical Science
Science	Physics
Science	Resource Management (Environmental Education)
Social Studies	Anthropology
Social Studies	Civics (Citizenship)
Social Studies	Economics
Social Studies	Ethnic Studies
Social Studies	Geography
Social Studies	History
Social Studies	International Studies
Social Studies	Philosophy
Social Studies	Political Science
Social Studies	Psychology

Social Studies	Religious Studies
Social Studies	Social Problems
Social Studies	Social Studies (Fusion Course)
Social Studies	Sociology
Social Studies	Women's Studies
Special Education	Adaptive Physical Education
Special Education	Agriculture - Special Education
Special Education	Art - Special Education
Special Education	Assistive Technology Specialist
Special Education	Autism
Special Education	Business Education - Special Education
Special Education	Cross Categorical
Special Education	Early Childhood Special Education
Special Education	Emotional Behavioral Disability
Special Education	Family and Consumer Ed - Special Education
Special Education	Hearing Impairment
Special Education	Intellectual (Cognitive) Disability
Special Education	Learning Disabilities
Special Education	Marketing Education - Special Education
Special Education	Media (SEIMC)/CSPD - Special Education
Special Education	Music - Special Education
Special Education	Orientation and Mobility
Special Education	Orthopedic Impairment
Special Education	Other Health Impairment
Special Education	Special Education Homebound Program
Special Education	Special Education Hospital Program
Special Education	Speech/Language Impairment
Special Education	Technology Education - Special Education
Special Education	Visual Impairment
Special Education	Vocational/Transition - Special Education
Other	Academic Support - Non-Special Education Pupils
Other	Academic Support- Teachers
Other	Alternative Education
Other	At-Risk Tutor
Other	Charter School
Other	Driver Education
Other	Early Intervening Services Teacher
Other	Homebound Instruction
Other	Human Resources Staff Members
Other	IDEA Part C
Other	Intern

Other	JROTC Instructor
Other	Mentor
Other	Montessori
Other	Neglected/Delinquent Program Transition
Other	Non-Teaching Time
Other	Out-of-State Online Teacher
Other	Permanent Substitute
Other	Safety Education
Other	School Age Parent Program
Other	Shorthand
Other	University/College Faculty Teacher

Appendix B: Locale Code Descriptions

The classifications and corresponding two-digit locale codes used by the National Center for Education Statistics (NCES) are as follows:

- City:
 - City – Large (11): Territory inside an Urbanized Area and inside a Principal City with population of 250,000 or more.
 - City – Midsize (12): Territory inside an Urbanized Area and inside a Principal City with population less than 250,000 and greater than or equal to 100,000.
 - City – Small (13): Territory inside an Urbanized Area and inside a Principal City with population less than 100,000.
- Suburban:
 - Suburban – Large (21): Territory outside a Principal City and inside an Urbanized Area with population of 250,000 or more.
 - Suburban – Midsize (22): Territory outside a Principal City and inside an Urbanized Area with population less than 250,000 and greater than or equal to 100,000.
 - Suburban – Small (23): Territory outside a Principal City and inside an Urbanized Area with population less than 100,000.
- Town:
 - Town – Fringe (31): Territory inside an Urban Cluster that is less than or equal to 10 miles from an Urbanized Area.
 - Town – Distant (32): Territory inside an Urban Cluster that is more than 10 miles and less than or equal to 35 miles from an Urbanized Area.
 - Town – Remote (33): Territory inside an Urban Cluster that is more than 35 miles from an Urbanized Area.
- Rural:
 - Rural – Fringe (41): Census-defined rural territory that is less than or equal to 5 miles from an Urbanized Area, as well as rural territory that is less than or equal to 2.5 miles from an Urban Cluster.
 - Rural – Distant (42): Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an Urbanized Area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an Urban Cluster.
 - Rural – Remote (43): Census-defined rural territory that is more than 25 miles from an Urbanized Area and also more than 10 miles from an Urban Cluster.